

**WHAT IS CLAIMED IS:**

1. A UTOPIA level interface in an ATM multiplexing/demultiplexing assembly in a base transceiver station interface subsystem in an IMT-2000 radio network controller, the ATM multiplexing/demultiplexing assembly including a UTOPIA level 2 execution unit (multiplexer) for supporting UTOPIA level 2 and executing an ATM layer function and a UTOPIA level 1 execution unit (processor) for performing the ATM layer function and supporting UTOPIA level 1, the UTOPIA level interface comprising a UTOPIA interface controller for carrying out an ATM physical layer function to interface the layers of the multiplexer and the processor with each other and for performing level interface between the UTOPIA level 1 and UTOPIA level 2 to provide a 16-bit data path.
2. The UTOPIA level interface in an ATM multiplexing/demultiplexing assembly as claimed in claim 1, wherein the UTOPIA interface controller includes transmission and reception FIFOs for temporarily storing data to be transmitted/received between the multiplexer and the processor, and a UTOPIA level conversion/control unit for transmitting/receiving a UTOPIA level 2 control signal to/from the multiplexer to allow the 16-bit data to be transmitted between the multiplexer and the transmission and reception FIFOs and for transmitting/receiving a UTOPIA level 1 control signal to/from the processor to allow the 16-bit data to be transmitted between the processor and the transmission and reception FIFOs.
3. The UTOPIA level interface in an ATM multiplexing/demultiplexing

assembly as claimed in claim 2, wherein the transmission FIFO includes two 16-bit transmission FIFOs.

4. The UTOPIA level interface in an ATM multiplexing/demultiplexing assembly as claimed in claim 2, wherein the reception FIFO includes two 16-bit reception FIFOs.
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